

IN THE CLAIMS:

- a. Please cancel claims 1-26.
- b. Please enter the following claims:

1-26 (Cancelled)

27. (New) A filter element comprising a composite homogenous structure of inorganic fibers and a reactant.

28. (New) A filter element as claimed in claim 27, wherein the filter element is a structure which has been formed by a process of injection-molding.

29. (New) A filter element as claimed in claim 27, wherein the inorganic fibers are selected from the group consisting of ceramic fibers, crystalline mineral fibers, amorphous mineral fibers, mineral wood, glass fibers and fibers with refractory properties.

30. (New) A filter element as claimed in claim 28, wherein the inorganic fibers are selected from the group consisting of ceramic fibers, crystalline mineral fibers, amorphous mineral fibers, mineral wood, glass fibers and fibers with refractory properties.

31. (New) A filter element as claimed in claim 27, wherein the inorganic fibers include ceramic fibers selected from the group consisting of alumina, alumina-silicate, calcium silicate and silicates.

32. (New) A filter element as claimed in claim 28, wherein the inorganic fibers include ceramic fibers selected from the group consisting of alumina, alumina-silicate, calcium silicate and silicates.

33. (New) A filter element as claimed in claim 27, wherein the reactant comprises activated carbon.

34. (New) A filter element as claimed in claim 27, wherein the reactant comprises a catalyst.

35. (New) A filter element as claimed in claim 33, wherein the activated carbon is in the form of a powder or fiber.

36. (New) A filter element as claimed in claim 34, wherein the catalyst comprises at least one precious metal or precious metal oxide.

37. (New) A filter element as claimed in claim 34, wherein the catalyst comprises at least one precious metal supported on metal oxide particles.

38. (New) A filter element as claimed in claim 36, wherein the precious metal or precious metal oxide thereof comprises 0.1 to 1% of the mass of the reactant.
39. (New) A filter element as claimed in claim 36, wherein the precious metal or precious metal oxide is selected from the group consisting of platinum, palladium, ruthenium, aluminum, titanium, tungsten, and vanadium.
40. (New) filter element as claimed in claim 27, further comprising a binder system.
41. (New) A filter element as claimed in claim 40, wherein the binder system comprises colloidal dispersion and at least one cationically modified starch or a flocculant.
42. (New) A filter element as claimed in claim 41, wherein the colloidal dispersion contains at least one substance selected from the group consisting of silica, alumina, titanium dioxide, zinc oxide or zirconium oxide.
43. (New) A filter element as claimed in claim 41, wherein the flocculant is selected from the group consisting of poly acrylamide, anionic or cationic organics, or inorganic complexes.
44. (New) A filter element as claimed in claim 27, wherein the filter element is a hollow, candle shaped filter element, closed at one end.

45. (New) A filter element as claimed in claim 27, wherein the reactant comprises 35 to 40% (by mass) of a 1 meter filter element weighing 750 to 800g.
46. (New) A method of manufacture of a filter element comprising the steps of:
- a. dispersing ceramic fibers in water;
 - b. adding a binder system;
 - c. mixing;
 - d. injection-molding to provide a filter element body of the desired shape; and
 - e. leaving the filter element to dry, wherein the method further includes the step of dispersing a reactant throughout the body of the filter element.
47. (New) A method according to claim 46, wherein the step of dispersing said reactant is by dispersing said reactant in said water.
48. (New) A method according to claim 46, wherein the step of dispersing said reactant is by saturating a formed filter element in said reactant.
49. (New) A method according to claim 48, wherein said reactant for saturating said formed filter element is applied in the form of a dilute aqueous solution or a suspension.
50. (New) A method according to claim 48, wherein said step of saturating is performed before said step of drying.

51. (New) A method according to claim 46, wherein the reactant comprises activated carbon.
52. (New) A method according to claim 46, wherein the reactant comprises a catalyst.
53. (New) A method according to claim 46, including the additional step of dipping a formed filter element into a dilute colloidal dispersion.
54. (New) An apparatus for removing contaminants from waste gas, comprising at least one filter element formed from a homogenous structure of inorganic fibers and activated carbon, means to supply the waste gas to be filtered to the at least one filter element, and means to supply hot nitrogen gas to the at least one filter element.
55. (New) An apparatus as claimed in claim 54, comprising means to heat the nitrogen gas to at least 400° C.